

REVISION OF AUSTRALIAN SPECIES OF THE SUB-
FAMILIES *CYPHALEINÆ* AND *CNODALONINÆ*.

(Fam. TENEBRIONIDÆ).

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(Plates vi.-vii.)

The *Cyphaleinæ* are almost entirely Australian, the only recorded exceptions being (*a*) the species of the genera *Crypsis* and *Artactes* from the Indo-Malayan Islands and Japan; (*b*) two species from New Guinea, described by Macleay as *Prophanes*, but which I consider to be *Cyphaleus*; and (*c*), a single species, *Cyphaleus valdivianus* Phil., from Chili. It is extremely probable that more will come to light as the fauna of New Guinea is more thoroughly investigated, while the single link with South America is an interesting fact of distribution. Its members include the handsomest of all the Tenebrionidæ, but endowed with strong powers of flight; and their habits and life-histories being almost unknown, comparatively few specimens are to be seen in ordinary collections. The subfamily presents strong evidence of belonging to an ancient but disappearing race, with its many genera and few species, and these sometimes not very closely related to one another.

The *Cyphaleinæ* are distinguished from the *Tenebrioninæ* by the following characters. *Head* flat, more or less enclosed in the thorax, eyes large and transverse, mandibles bifid at the extremity, antennæ generally long, with joints 6-10 successively enlarged. *Prothorax* generally bisinuate at apex and base, with the anterior angles well produced; the prosternum is in general strongly compressed or carinate, its process received behind into a wide cavity of the mesosternum. The intercoxal process wide, oval, or angular, tibiæ with short spines, not usually enlarged at apex, tarsi long.

Some of the genera (e.g., *Chartopteryx*, *Prophanes*, and *Cyclophanes*) present a feature which seems to have escaped notice, in the excavated, or strongly depressed central part of the apical segment of the abdomen. Most of the genera, including the above three, also *Paraphanes*, *Hemicyclus*, *Oremasis*, and *Cyphaleus*, show strong sexual characters, viz., (1) the protuberant ovipositor of the female, (2) the strongly enlarged three basal joints of the front tarsi, and, to a less extent, of the intermediate tarsi. The ovipositor has not been mentioned, so far as I am aware, by other writers, and should not be mistaken for the male organ. It is linear-lanceolate, slightly enlarged towards the apex, sulcate or convex on its upper surface, bifid at its extremity, with two small linear appendages, and a few hairs near apex. It has been customary for writers on this group to insert an apology for adding a new genus. In adding four new genera to the present list, the author would rather apologise for not adding more, since some of the existing genera, especially *Cyphaleus* and *Chartopteryx*, contain species of strikingly different facies. The possession of more material, however, is necessary before an author can sacrifice or mutilate rare specimens for dissection; and until this is done, it is better to include such doubtful species under existing genera, if their salient characters render the classification suitable. As a partial compensation, two of the existing genera are omitted, *Tetraphyllus* as being a genus of the Subfamily *Cnodaloninæ*, recorded only from Madagascar; the two Australian species *T. Reaumuri* Castel., and *T. sumptuosus* Hope, belonging to other genera (*vide infra*); while *Decialma* Pasc., = *Olisthæna* Erichs., and must be sunk. Pascoe had evident doubts on this subject, when proposing the genus *Decialma*. The slight difference in the antennæ may readily be explained by an error of observation, and the great difficulty in estimating the ratio of length to breadth of small antennal joints (*vide note on Decialma, infra*). There is very little distinction between *Hectus* and *Olisthæna*, save in the wider form and more widely separated eyes of the former. For the present, I would retain *Hectus* until intermediate forms appear. Pascoe's Table of Genera (Ann. Mag. Nat. Hist. (4.) iii., 1869, p.288) is misleading, in placing *Prophanes*

and *Cyphaleus* under the heading "Prosternum *not* prolonged or compressed." All the species known to me (the majority of the described species) have the prosternum strongly compressed, as stated by Lacordaire and Westwood. In the new Catalogue of Junk, Herr Gebien has included *Ephidonius* Pasc., in this sub-family, but the strongly exerted head, with its broad front, its small widely separated eyes, its long tibial spurs, and differently clothed tarsi, *inter multa alia*, separate it so widely from the other genera of the Cyphaleinæ, that it cannot be so included. Both *Ephidonius* and *Brises*, as Bates remarks, (Trans. Ent. Soc. London, 1872, p.280) occupy an uncertain position. The distinction between "epipleuræ entire" and "epipleuræ abruptly narrowed behind," is a very untrustworthy character for distinguishing some of the genera in Pascoe's Table, and the author has included under *Prophanes* only those species which have the more strongly characteristic spinose prothorax and elytral apex. *Oremasis*, *Cyclophanes* and *Prophanes* have abruptly terminated epipleuræ clearly defined, while *Chartopteryx*, *Cyphaleus*, *Mærodes*, *Anausis* and others have it to a modified extent. Pascoe's classification was published in 1869; the following tabulations of genera and species include those since added by Haag-Rutenberg, Bates, Lea, Blackburn, and the author.

Since writing the above, the author has received a number of specimens from the British Museum, that have been compared with types, or otherwise identified, together with some valuable notes on the types by Mr. K. G. Blair. Thus on *Apomestris*, Mr. Blair writes: "The genus does not seem to me really distinct from *Altes*, which also has the anterior femora with a similar tooth, though the hind femora are plain. The sculpture is the same in both, and there is the same indistinct ridge from the humerus to the tip of the elytra."

Mærodes westwoodi Macq.—There seems to be a strong presumption that this is identical with *Prophanes aculeatus* Westw., the type of the genus *Prophanes*. Four specimens sent by the British Museum include one, named by Pascoe as *P. aculeatus*. If this synonymy be maintained, the genus *Mærodes* must be sunk. Unfortunately the type of *P. aculeatus* is in the Melly

- 30(36) Basal joint of posterior tarsi much shorter than the rest united.
 31. Epipleuræ prolonged..... *Cyphaleus* Westw.
 32(36) Epipleuræ abruptly narrowed behind.
 33(35) Elytra irregularly punctate.
 34. Elytra spinose at apex, form elliptic..... *Oremasis* Pasc.
 35. Elytra not spinose at apex, form widely ovate..... *Cyclophanes*, n.gen.
 36. Elytra seriate-punctate, form parallel *Paraphanes* Macl.
 37(41) Anterior angles of prothorax spinose.
 38(40) Eyes moderately distant.
 39. Body very convex, widely ovate, coloured..... *Prophanes* Westw.
 40. Body depressed, elongate, black or obscure bronze.... *Mærodes* Waterh.
 41. Eyes much closer, colours variegated..... *Anausis* Bates.
 42(46) Prosternum not compressed nor carinate.
 43(45) Mesosternum notched.
 44. Eyes partially covered by prothorax, tarsi pilose beneath.....
 *Lygestria* Pasc.
 45. Eyes free, tarsi partially clothed beneath... .. *Barytipha* Pasc.
 46. — Mesosternum not notched..... *Mithippa* Pasc.
 The numbers within brackets, denote how far down the first column the specified character applies.

TABLES OF SPECIES.

LEPISPILUS Westw.

- 1(3) Elytra with ocellate depressions clothed with white pubescence.
 2. Sides of prothorax widely rounded..... *rotundicollis* Blackb.
 3. Sides of prothorax subangulately rounded, sinuate behind.
 *sulcicollis* Boisd.
 4. Entirely black, without pubescence... .. *stygianus* Pasc.

L. rotundicollis Blackb., is, I believe, distinct from *L. sulcicollis*, though both appear to be variable. I have taken it at Kosciusko, and on the Blue Mts., while *L. sulcicollis* is widely distributed throughout Australia and Tasmania

L. stygianus Pasc., occurs plentifully in the higher levels of the Australian Alps, and on Mt. Kosciusko. Both Mr. Lea and the author have previously commented on its distinction from Boisduval's species.

PLATYPHANES Westw.

- 1(8) Elytra with 14 lines of punctures.
 2(7) Elytra strongly striate-punctate.
 3(5) Widely ovate (length much less than twice breadth).
 4. Colour golden-green, with purple margins. *superbus* Blackb.

widened posterior tibiæ." This is, I consider, only sexual, and a male character. The distinction of *O. Pascoei* Bates, from *O. tenuitarsis* is very doubtful, depending on slight differences noted in the brief diagnosis of the former (Trans. Ent. Soc. Lond. 1873, p.358). Mr. Blair notes that Pascoe's type appears to be an immature specimen, thus increasing the probability of the synonymy. The two species described as *Decialma* by Macleay, are evidently slight colour-varieties of the same species. I have examined the types. They do not belong to this genus, and will be found under *Chariotheca* (Cnodaloninæ).

HEMICYCLUS Westw.

- 1. Legs dark metallic.
- 2. Elytra smooth and mirror-like.....*Reaumuri* Casteln.; *grandis* Westw.;
metallicus Westw.
- 3. Elytra distinctly punctate..... *punctulatus* Pasc.
- 4. Legs yellow..... *flavipes*, n.sp.

Synonymy.—*H. metallicus* Macl. = *H. grandis* Westw. = *H. (Tetraphyllus) Reaumuri* Casteln. The descriptions are almost identical, and Castelnau's name has the priority. *H. metallicus* is evidently the male, and *grandis* the female of the same species. I have examined a considerable number of specimens; and Mr. Blair has examined the types, and confirms my conclusions. *Tetraphyllus sumptuosus* Hope, is almost certainly = *Espites basalis* Pasc. Unfortunately its type appears to have been lost. Professor Poulton has made a search amongst the Hope Collection in vain for it. The genus *Tetraphyllus* thus disappears from the Australian lists, and is apparently only from Madagascar.

BOLBOPHANES n.gen.

- 1(3) Colour bronze with metallic reflections.
- 2. Elytra smooth, nitid, and finely punctate, legs red..... *Dumbrelli* Lea.
- 3. Elytra longitudinally ridged, legs blue..... *rugatus*, n.sp.
- 4. Colour purple or green, elytra less nitid, closely rugose-punctate.....
..... *varicolor*, n.sp.

CHARTOPTERYX Westw.

- 1(6) Body pilose.
- 2(5) Form very convex.
- 3. Elytra with lichen-like clothing, forming a pattern at apex.....
..... *Childreni* Westw.

4. Elytral colours more or less in vittæ, apex spined..... *Mastersi* Macl.
 5. Elytral colours intermixed, apex unspined... .. *victoriensis* Blackb.
 6. Form subdepressed, elytral punctures much smaller than in 5.....
 *Blackburni*, n.sp.
 7(11) Body glabrous.
 8. Colour nitid bronze, irregularly punctate *glaber* Macl.
 9(11) Colour rather dull chocolate-brown.
 10. Size very large, punctures distinct..... .. *imperialis* Cart.
 11 Size much smaller, punctures obscure..... .. *planus*, n.sp.

The above probably belong to three different genera, of which the first four are true *Chartopteryx*. *C. imperialis* Cart., and *C. planus* have the general form and tarsi of the genus, but differ so markedly in clothing and sculpture as to constitute a distinct group; while *C. glaber* Macl., differs from the others, except *C. Blackburni*, in its much less convexity. Three specimens of *C. glaber* were taken by the author at Acacia Creek, N.S.W., as well as *C. planus*, by beating dense creepers in the scrub. Single specimens of *C. Blackburni* and *C. planus* are amongst the British Museum specimens sent for determination.

CYPHALEUS Westw.

- 1(4) Apex of elytra not mucronate in either sex.
 2(5) Body pilose.
 3. Pronotum black, elytra variegated or purple..... *formosus* Westw.
 var., elytral punctures less crowded . *iopterus* Westw.; *insignitus* Pasc.
 4. Whole surface black. *rugosus* Gray; *aterrimus* Gray.
 5. Pronotum green or blue, elytra variegated, size larger than preceding.
 Apex of elytra bluntly mucronate in ♀ *fulgidipennis* Boisd.;
Schmeltzi Haag-Rut.
 6(8) Body glabrous.
 7. Pronotum obscure green or blue, elytral punctures much smaller and
 less deeply impressed than in the preceding..... *æreus* Waterh.
 8. Pronotum brilliant copper, elytral disc blue, sides golden ..
 *cupricollis* Macl.

C. insignitus Pasc. = *C. iopterus* Westw. = *C. formosus* Westw.

Synonymy.—Mr. Blair has compared the types of *C. iopterus* Westw., and *C. insignitus* Pasc., and finds them identical. He says: "Pascoe was probably misled by a much broken example with greenish head and thorax, labelled *C. iopterus* Westw., in the British Museum Coll., wrongly (a better example, included

in the consignment sent, = *C. Schmeltzi* Haag ex desc.)". Pascoe was, no doubt, influenced also by the catalogues, which give *C. iopterus* Westw., as a synonym of *Chrysobalus fulgidipennis* Boisd. This is certainly a mistake, as the scanty description of Boisduval contains the words "thorace cyaneo," whilst in *C. iopterus* that segment is quite black. *C. formosus* Westw., (specimens compared with types of both, are sent) only differs from *C. iopterus* Westw., as the description states, in "the smaller size, more regular and slighter punctures of the elytra, and the uniform violet-purple colour" of *C. iopterus*. In the author's opinion, these distinctions are rather individual than specific. In the whole group, the species with large punctures (e.g., *Prophanes Mastersi* Pasc.) are subject to wide variation in the disposition and closeness of these punctures; while in colour, the variation is between concolorous purple to a brilliant variegation of green, blue, and purple; and in size, from $18 \times 8\frac{1}{2}$ mm., to 24×12 mm. (the measurements of a ♂ and ♀ specimen now before me).

C. Schmeltzi Haag-Rut., = *C. fulgidipennis* Boisd.—The description of Boisduval does not err on the side of completeness of detail, but every word of it applies to the large species so named in our museums. The only difference noted in *C. Schmeltzi* is the mucronate apex of the elytra. Having examined several specimens, I find that, while identical in other respects, some specimens exhibit these blunt teeth at the elytral apex, but in others the tooth is wanting. All the former are ♀, the latter ♂, as shown by the widely dilated basal joints of the anterior tarsi, and the longer antennæ in the ♂ specimens. *C. cereus* Waterh., is rare. I have two specimens from Brisbane and Sydney respectively. *C. cupricollis* Macl., is a fairly common Queensland species.

CYCLOPHANES n.gen.

1. Underside black, size large, punctures coarse. *gloriosus*, n.sp.
- 2(4) Underside brilliantly metallic, size smaller.
3. Elytra variegated, slightly nitid, with lateral vitta. *variegatus*, n.sp.
4. Elytra brilliant green (purple reflections), without vitta, punctures much finer. *splendens*, n.sp.

a letter from my friend, Mr. G. E. Bryant, who has collected widely in Australia, and who has been kind enough to send me drawings of the types of the above. From the drawing of *A. Macleayi* Bates, the apices of elytra, though produced, are not certainly produced so far as the spines. Of this species, Mr. Bryant writes, "It differs from the other two" (*A. spinosus* and *A. metallescens*) "in being smaller and narrower, and the thorax more thickly punctured, and is a much bluer colour." (A specimen in Mr. Lea's collection, from Mullewa, W.A., exactly answers to this description.) Of the others he says "*P. spinosus* Waterh., is a much broader insect, and the eyes are wider apart. *P. metallescens* Westw., happens to agree with one of the specimens put with *P. spinosus*; it differs from *P. spinosus* only in having the anterior angles of the thorax sloping in, instead of out; in colouring, they are exactly alike, and I dare say the shape of the thorax is sexual." He also says, "I believe *A. Macleayi* Bates, *P. spinosus* Waterh., and *P. metallescens* Westw., are, in all probability, the same species." I must here state my agreement with the sexual differences. Three specimens of *A. metallescens* are before me, of which one is male, two female; the male has the thoracic spines straight, or slightly in-sloped; the two females have them distinctly pointing outwards; while the species varies considerably in size and width (one of the females has the ovipositor extruded; the male has the front tarsi slightly enlarged). I would, for the present, hold *A. Macleayi* Bates, as distinct, the single type-specimen recorded having certain defined distinctions; while its widely different locality is noteworthy (Champion Bay). My specimens of *A. metallescens* Westw., are from Cootamundra, N.S.W.; Gippsland, and Queensland, while that of *A. quadrispinosus* Waterh., was taken by myself at Acacia Creek, Northern New South Wales.

LYGESTIRA Pasc.

The species are correctly stated in Junk's Catalogue. Blackburn has pointed out the synonymy of *L. funerea* Pasc., with *L. simplex* Westw., while the second species, *L. lata* Waterh., is easily distinguished by its wider form and finer punctuation.

L. simplex Westw., is widely distributed in New South Wales and Victoria, while my specimens of *L. lata* Waterh., are from the Tweed River, N.S.W., and South Queensland.

MITHIPPIA Pasc.

1. Prothorax widest at apex, punctures coarser, elytra striate-punctate...
..... *aurita* Pasc.
2. Prothorax with parallel sides, punctures finer, elytra irregularly punctate *Jansoni* Bates.

I have the former from the Blue Mountains. Of the latter, I have a cotype from West Australia, kindly given me in exchange from the British Museum.

As it is impossible to identify *Prophanes striato punctatus* Westw., from the ten words of its description, I append a description of the insect so labelled in the South Australian Museum, kindly lent me, and which applies also to the two specimens in the Macleay Museum, the first from Brisbane, the latter labelled New South Wales. It is a *Platyphanes*, the largest of the elongate group.

PLATYPHANES STRIATO-PUNCTATUS Westw.

Elongate ovate, black, moderately nitid, pronotum and under side with brownish tint, palpi, antennæ, and tarsi reddish.

Head: labrum emarginate; epistoma straight in front, rounded at sides, making an angle with the strongly raised and subcornute canthus, the latter straight at the sides; eyes bordered on the inside by a carina, separated by a distance equal to the 2nd and 3rd antennal joints combined, the whole clearly and not very closely punctate. Antennæ not extending to base of prothorax, enlarged towards apex, joint 3 little longer than 4, 3-7 obconic, 8-11 oval, longer than wide, 11 longer than 10. *Prothorax* $4\frac{1}{2} \times 7\frac{1}{2}$ mm., length measured in the middle, width at base, arcuate-emarginate at apex, the anterior angles strongly advanced and subacute but rounded at the tips; sides nearly straight, extreme border thickened anteriorly, finer posteriorly and on front angle; posterior angles widely acute (about 80°), and very slightly produced, base bisinuate; disc with two foveæ

at the anterior corners, and two smaller foveæ at base, clearly but not deeply punctate. *Scutellum* curvilinear-triangular. *Elytra* $19 \times 10\frac{1}{2}$ mm., very convex, wider than prothorax at base, shoulders widely rounded, widest in front of middle, and gradually tapering, without sinuation, to the apex, narrowly bordered and channelled, the channel subobsolete at apex; each elytron with ten rows of large, round, very deep punctures, separated longitudinally and transversely by convex intervals, forming promiscuous reticulations, besides a short scutellary row of smaller punctures, and an abbreviated row of similar size to these between the 3rd and 4th series; also a lateral row on extreme sides, almost concealed by the channel, all the series subobsolete at apex, the punctures in series often confluent or so closely placed as to give the appearance of lying in deep sulci. *Epipleura* smooth, apical segment of abdomen finely punctate, the basal segments striolate and coarsely punctate, sides of metasternum pustulose, their episterna rugose-punctate; *prosternum* carinate, produced and rounded behind; tibiæ with a short spine, hind tarsi with basal and apical joints of equal length. *Dimensions*, $25 \times 10\frac{1}{2}$ mm.

Hab.—Brisbane; also New South Wales.

The elytra are described as "cæruleo-nigris" in Westwood's laconic diagnosis of ten words. He also gives "*Melbourne*" as the habitat, while its dimensions are given as "magnitudo *P. simplicis*."

It is nearest *P. creber* Blackb., the type of which, in the Melbourne Museum, has been lent me for examination, through the courtesy of Mr. Kershaw. *P. creber* differs in the following particulars: larger size, less convex, colour nitid bronze, eyes not bordered by carina, head and pronotum less strongly punctate, the lateral border of the latter uniformly thickened, its sides sinuate; elytra without scutellary row of punctures, the punctures in series smaller; there are about fourteen rows, the lateral series ill-defined; but all are continuous to apex (no abbreviated row), and nowise reticulate, or sulcate, *inter multa alia*.

PLATYPHANES CLARKI, n.sp.

Widely ovate, brilliantly nitid, head metallic green and purple, pronotum and elytra dark olive-bronze, the margins of both and the epipleuræ of the latter metallic gold or purple; legs and underside metallic black, the former very, the latter moderately nitid, apical joints of antennæ piceous, tarsi and tibiæ with golden pubescence.

Head truncate in front of epistoma, its sides rather straightly widening, with a large foveate impression at each angle, and separated from front by a wide concavity with an arched suture; front convex, the forehead rather sparsely, the clypeal area more thickly dotted with fine but evident punctures; eyes separated by a space equal to the transverse diameter of one eye; antennæ robust, not reaching the base of thorax, with joints 8-11 strongly enlarged, 3 little longer than 4, 5-7 gradually widening, 8-10 nearly circular, 11 ovoid, larger than 10. *Prothorax* moderately flat, glabrous, twice as wide as long (5 × 10 mm.), arcuate-emarginate at apex, anterior angles advanced but rounded, sinuate-emarginate at base, with a wide central lobe, and acute posterior angles produced backwards; sides narrowed anteriorly but uniformly rounded, lateral margins widely furrowed, extreme border reflexed and partly continuous on sides of apex; surface very nitid, minutely and sparsely punctate (punctures only visible under a lens). *Scutellum* transversely triangular, its centre convex, sides depressed. *Elytra* rapidly widening behind the prothorax, humeral angles subobsolete, middle two-thirds parallel, apex rather abruptly narrowed and unarmed, with uniformly narrow margin throughout, extreme border raised, the channel within of a bright metallic colour; very convex, gibbous in the humeral regions, convexity greatest in front of middle, sutural region depressed behind scutellum, faintly striate-punctate, the striæ only perceptible when viewed from the side, with fourteen lines of small punctures becoming obliterated on sides and apex, and very faintly impressed near suture, otherwise distinct and in general placed at a distance nearly equal to that between the striæ; intervals scarcely convex, smooth and polished. *Abdomen*:

last segment minutely and closely punctate, in the other segments punctures somewhat obscured by the close and fine striolation, sides of mesosternum and epimera with larger punctures, prosternal process widely rounded behind, compressed (saddle-like, not carinate), and strongly produced forward, mesosternal cavity rounded, its branches very tumid; anterior tarsi not apparently enlarged, posterior tarsi with basal joint longer than second and third combined, the claw-joint as long as the other three combined. *Dimensions*, 23-25 × 12-14 mm.

Hab.—Tenterfield (Dr. C. D. Clark); Dorrigo (sent by Mr. French).

Two specimens, both male, under examination, which I name in honour of the friend who first roused my interest in entomology, and whose collection contained one of the handsome specimens. The species is readily distinguished from its nearest allies, *P. creber* Blackb., and *P. superbus* Blackb., being narrower (in proportion to length), darker, granulated near the eyes, with sides of prothorax sinuate, and with its elytra "cancellatopunctulatis," while *P. superbus* is separated by colour, and its convex elytral intervals, amongst many other differences. Type in the author's Coll.

There are specimens also in the Macleay Museum, Sydney, and in the Adelaide Museum.

PLATYPHANES CHALCOPTEROIDES, n.sp.

Elongate, subparallel, moderately convex; underside and legs black, head greenish-black, pronotum dark green with a purple patch on each side, and purple tinge at apex and base; elytra variegated, the colours not arranged in vittæ but gradually merging (*i.e.*, the suture blue, disc chiefly green, sides purple with the external interval golden).

Head: labrum emarginate, epistoma evenly rounded, canthus little raised, suture faintly impressed, eyes partially covered by prothorax, separated by a space equal to the transverse diameter of one eye, evenly and closely punctate, antennæ not reaching the base of prothorax, joint 3 scarcely longer than 4, 5-7 gradu-

ally widening, 8-10 nearly round, 11 shortly ovoid. *Prothorax* 5 × 8 mm., arcuate-emarginate at apex, anterior angles advanced but rounded, sides evenly rounded, wider at base than at apex; posterior angles obtuse, base sinuate, central lobe produced, lateral borders round and reflexed, narrowly channelled within, the border slightly produced, on apex gradually evanescent towards the middle, disc closely and evidently punctate, with two small foveæ near the middle, central line only indicated on basal half by some lævigate spaces. *Scutellum* large, triangular, its sides rounded, nitid and finely punctate. *Elytra* convex, nowhere gibbous, soon widening behind prothorax, then parallel for the greater part, and evenly rounded at apex, substriate-punctate, the striæ not always evident, with ten rows of punctures (besides a short scutellary row), the punctures successively larger from suture to the sides, those on the centre of disc somewhat as in *Chalcopterus iridicolor* Bless., but less evenly spaced; between rows 3 and 4 a short extra row starting from the base and suddenly ending at a distance slightly beyond the scutellary row, all punctures becoming obsolete at extreme apex; intervals flat and lævigate; legs and underside minutely punctate, base and sides of metasternum with transversely ridged punctures, its epimera with a few larger round punctures, prosternum compressed and carinate in front, rounded and produced behind into the corresponding mesosternal cavity; legs rather short, the tibiæ compressed and wide (the anterior and intermediate slightly curved), tarsi shorter than usual, the claw-joint of posterior tarsi as long as the rest combined. *Dimensions*, 20 × 10½ mm.

Mab. — Duinga, South Queensland; Cairns, N.Q.

Two specimens, male and female, the former obtained from Mr. W. Duboulay, the latter from Cairns, are superficially like some of the larger species of *Chalcopterus*, especially in the colour, form and sculpture of the elytra, and are not very near any described species of the genus, though evidently belonging to the group that contains *P. elongatus* Macl., and *P. oblongus* Waterh. Specimens examined from Melbourne and Adelaide Museums. Type in the author's Coll.

PLATYPHANES MINOR, n.sp.

Ovate, dark coppery-bronze (sometimes greenish), very nitid; antennæ, palpi, legs, and tarsi chestnut-red, underside reddish-brown.

Head and prothorax closely punctate, the former with labrum slightly emarginate, epistoma evenly arcuate, canthus raised and earlike, eyes separated by a distance less than the transverse diameter of one eye, antennæ not reaching base of prothorax, their four apical joints strongly enlarged, 3 little longer than 4, subconic, 8-10 nearly round, 11 longer and wider than 10, ovoid. *Prothorax* rather squarely emarginate in front, anterior angles advanced, acute but rounded at tips, not much wider at base than at apex, sides nearly straight, feebly rounded anteriorly, feebly sinuate near base; posterior angles acute and pointing obliquely outward, margins raised, finely punctate, rather widely channelled within, narrowly continued on apical border as far as the eyes, base sinuate, without border. *Scutellum* nearly semi-circular, convex and punctate. *Elytra* ovate, moderately convex, wider than prothorax at base; humeral angle obtuse, scarcely gibbous on shoulders nor compressed on flanks, their outline (seen from the side) a regular curve, highest about the middle, margin very narrow, the groove within it containing an irregular row of large punctures, lineate-punctate, with about ten rows of large round punctures, closely placed (at a distance less than the diameter of one), and a short scutellary row, the punctures becoming larger and sometimes confluent and irregular on the flanks, intervals apparently quite impunctate and very nitid, sometimes transversely raised (subcancellate). Abdomen finely striolate, the two basal segments with large scattered punctures, the apical segment with close minute punctures, metasternal punctures similar to those of *P. ellipticus* (supra), the prosternal sculpture much finer (not at all rugose), the process narrowed but not carinate, mesosternal cavity and intercoxal process triangular; tarsi as in *P. ellipticus*. *Dimensions*, $12 \times 5\frac{1}{2}$ mm.

Hab. — Dorrigo, New South Wales (Mr. R. J. Tillyard).

I am indebted to that enthusiastic naturalist, Mr. Tillyard, for the two specimens described above, in which I cannot distinguish

any sexual character. It differs from all described species in its small size, and comparatively coarser sculpture, which combined with its red legs and nitid colour, will enable it to be readily identified. In one specimen, the colour is greenish, with its punctures cuprescent and fiery. Type in the author's Coll.

PLATYPHANES PARALLELUS, n.sp.

Oblong, nitid black; antennæ, oral organs, coxæ and tarsi red; apex and underside of tibiæ, parts of sternum piceous.

Head and prothorax finely and very closely punctate, with labrum piceous and emarginate, epistoma evenly and widely rounded, suture clearly defined, canthus little raised, eyes partly concealed by prothorax and separated by a distance about half the transverse diameter of one eye; antennæ not reaching the base of prothorax, joint 3 longer than 4, 8-11 considerably widened and nearly round, 11 scarcely longer than 10. *Prothorax* ($3 \times 4\frac{1}{2}$ mm.) more convex than in the two preceding species, not much wider at base than at apex, widest at middle, apex with middle part subtruncate, anterior angles strongly advanced but widely rounded, sides rounded anteriorly, rather straightly narrowed posteriorly, posterior angles obtuse, disc with two small impressions near base; the whole narrowly bordered throughout. *Scutellum* equilaterally triangular, punctate. *Elytra* parallel, very little convex longitudinally, slightly gibbous at shoulders, humeral angle obtuse, apex bluntly rounded, very narrowly margined and channelled; lineate-punctate, with about twelve lines of punctures, besides a short scutellary row, the punctures increasing in size outwards, unequally spaced, the rows closer than in *P. minor*, the lateral punctures much coarser than in *P. ellipticus* or *P. cyaneus*, and at least as large as in *P. minor*, the lines on the flanks quite confused, the punctures there coarse and irregular; at apex the lineate punctures very small but distinct. Abdomen finely punctate and striolate; metasternum and its epimera sparsely punctate, mesosternal cavity and intercoxal process triangular; prosternum finely rugose, its process sharply carinate, produced and narrowly rounded behind; tarsi as in the two preceding. *Dimensions*, $14 \times 6\frac{1}{2}$ mm.

Hab.—Dorrigo, New South Wales (Mr. R. J. Tillyard).

Another of Mr. Tillyard's captures in this prolific district, in November, 1911. The species differs from the two preceding species in its more convex prothorax, with more rounded anterior and obtuse posterior angles, different elytral sculpture, and more parallel form, besides its colour distinctions. Type in the author's Coll.

PLATYPHANES FRENCHI, n.sp.

Elongate-ovate; glossy bronze above, underside black; antennæ, tarsi and legs brownish-red.

Head finely and closely punctate, epistoma arcuate, its curve slightly interrupted at the canthus, limiting suture definite and curved, eyes separated by a distance greater than the apparent transverse diameter of an eye; antennæ with joint 3 shorter than 4-5 combined [joints 7-11 wanting]. *Prothorax* $4 \times 7\frac{1}{2}$ mm., widest at base, length measured in the middle, rather straight at apex, its angles little advanced and rather widely rounded, sides gently and arcuately widening to the base, a feeble sinuation near the acute posterior angles, base strongly bisinuate, produced at the middle and at the angles; lateral border somewhat thick, narrowly channelled within and continuous on apex behind the eye; an irregular depression from the anterior angles along the sides and base, interrupted on the central lobe; without any sign of medial line, disc punctate similarly to the head. *Scutellum* widely triangular. *Elytra* ovate and convex, thrice and one-half as long as the prothorax, shoulders obtuse, sides with narrow horizontal margin, almost disappearing at shoulders and apex; with ten rows (besides a short scutellary row) of small closely placed punctures, intervals quite smooth and very nitid; epipleuræ bronze, and finely punctate. *Abdomen* punctate-striolate, the last segment with a shallow depression; sides of metasternum and epimera with large pitted punctures; prosternum carinate, its process produced anteriorly, and fitting into a semicircular groove in the mesosternum behind; intercoxal process forming a wide pointed arch; apical joint of all tarsi as long as the rest combined. *Dimensions*, $19 \times 9\frac{1}{2}$ mm.

Hab. - Condamine River, Queensland; and New South Wales.

A single specimen, ♀, in the Melbourne Museum (French Coll.). I have seen also two specimens sent by Mr. Lea from the Adelaide Museum (one labelled Sydney), and one sent from the British Museum. Its form is between *P. cyaneus* Pasc., and *P. elongatulus* Macl., (less gibbous than the former, and wider than the latter). The head, thorax, and elytra are equally nitid and brilliant. Type in the National Museum, Melbourne.

PLATYPHANES QUADRIFOVEATUS, n.sp.

Elongate, parallel; head and underside black, pronotum and elytra olivaceous, nitid; legs and antennæ brown, apical joints of the latter and tarsi reddish.

Head: labrum prominent, epistoma truncate, canthus raised, rather square in front and parallel at the sides, limiting suture scarcely evident; eyes large, scarcely free of the prothorax, separated by a distance less than the transverse diameter of one eye; closely and finely punctate; antennæ not extending to base of prothorax, joint 3 little longer than 4, 7-11 considerably and successively widened, 8-10 wider than long, nearly round, 11 longer than wide. *Prothorax* $5 \times 7\frac{1}{2}$ mm., length measured in the middle, widest at middle, slightly convex, evenly arcuate at apex, anterior angles acutely and dentately produced and reflexed, sides sinuate behind angle, feebly rounded and narrowed behind, posterior angle obtuse, with narrow raised border at sides and apex, base bisinuate, disc with fine shallow punctures throughout, and four large, almost circular foveate depressions at equal distances in a straight transverse line across the middle, one (smaller) on each side near the margin, two (larger and deeper) on middle of disc. *Scutellum* cordate, finely punctured. *Elytra* elongate, parallel for the greater part, moderately convex, length nearly twice the width, wider than prothorax at base, shoulders round, not sinuate before the apex, narrowly and evenly margined throughout; striate-punctate, with ten rows of large, closely placed punctures, intervals slightly convex and impunctate, the last row (on sides) containing the largest punctures, those in the sixth and ninth rows somewhat confused, the sixth row terminat-

ing abruptly before the apical declivity, striæ and punctures obsolescent at apex; abdomen with first segment coarsely rugose, with a few large punctures, between the coxæ, these punctures and rugosity finer on the second segment, apical segments minutely and densely punctate; intercoxal process widely V-shaped, metasternum smooth, prosternum compressed, its process saddle-shaped, terminating anteriorly in a sharp angle, posteriorly bluntly rounded, with a corresponding mesosternal cavity, the latter strongly rugose or subtuberculate; legs stout, middle tibiæ slightly curved, tibial spurs very short, posterior tarsi with claw-joint nearly as long as the rest combined. *Dimensions*, $25 \times 10\frac{1}{2}$ mm.

Hub. — Queensland.

Var.(or ♀) *subangulatus*, smaller and more bronzed, legs and antennæ a paler red-brown, with anterior angles of prothorax produced *but rounded*, elytral intervals flatter, the punctures in striæ smaller, those in the sixth and ninth rows more irregular.

The species is near *P. oblongus* Waterh., but differs in the shape of prothorax, with its strongly dentate anterior angles, and nearly straight sides, reddish legs, and antennæ; moreover, the short scutellary stria (present in *P. oblongus*) is wanting. I have been much puzzled as to the relation between *P. quadri-foveatus* and the *var.* specified above, but being unable to find any describable differences of structure, except the remarkable one of its anterior angles, I prefer, for the present, not to consider the *var.* as a distinct species. I believe them to be of opposite sexes.

The type of *P. quadrifoveatus* is in the National Museum, Melbourne; *var. subangulatus* is in the author's Coll. There is a specimen of the former in the Macleay Museum and of the latter, one in the British Museum consignment, from the Richmond River; and I have since received another from Mount Tambourine, Q., through Mr. R. J. Tillyard.

PLATYPHANES ELLIPTICUS, n.sp.

Elongate-ovate, apex somewhat acuminate; dark coppery-bronze, nitid, sometimes greenish; epipleuræ bright bronze; underside, legs, and antennæ black.

Head and prothorax finely, closely punctate, the former with labrum ciliate and emarginate; epistoma truncate in front, rounded at sides, canthus not prominent, suture scarcely defined; eyes partly concealed by prothorax, separated by a distance wider than the transverse diameter of one eye; antennæ extending beyond the middle of prothorax, four apical joints considerably enlarged, 3 longer than 4, less than 4 and 5 combined, 8-10 nearly round, 11 ovoid. *Prothorax* wider at base than at apex, arcuate-emarginate at apex, anterior angles prominent and rather widely acute; sides evenly rounded, with round, raised, strongly thickened and finely punctured border, narrowly channelled within; posterior angles acute, and produced a little backward, border narrowed and continued on apex as far as the eye: base very sinuate, without a border, middle lobe wide, middle line faintly indicated by lævigata space on basal half. *Scutellum* triangular, depressed in middle, minutely punctate. *Elytra* slightly wider than prothorax at base, convex and a little gibbous at shoulders, these obtuse; sides subparallel on middle two-thirds, flanks a little flattened at middle; striate-punctate, with twelve faintly impressed striæ (besides a short scutellary one), the punctures irregular in size and distance (very similar to those in *P. cyaneus* Pasc.), both striæ and punctures becoming obsolete at apex, obscure and irregular on the sides, intervals flat and very minutely punctate. Abdomen finely striolate, apical segment only showing minute punctures, sides of metasternum with oval ridged punctures, epimera with large round punctures, intercoxal process wide, its apex truncate; prosternum coarsely rugose, its process narrowly conical, not carinate, narrowly rounded behind, produced and almost pointed at apex; mandibles bifid at apex; tarsi rather short, not enlarged in the male, posterior tarsi with basal joint as long as the next two, claw-joint not as long as the rest combined. *Dimensions*, 11-14 × 5½-7 mm.

Hab.—North Queensland (Mr. F. Dodd).

Eight specimens, sent by Mr. Dodd, are near but distinct from *P. cyaneus* Pasc., from which it differs in its narrower and more elongate form, more widely rounded and thickened border

to prothorax, sharper anterior angles and black tibiæ, *inter alia*. Both in *P. cyaneus* and in *P. ellipticus*, the colour may be coppery, green, or cyaneous, but is usually concolorous and variable in size. I have specimens of *P. cyaneus* Pasc., (a common Queensland insect) from 13×7 to $16 \times 8\frac{1}{2}$ mm., from Rockhampton and the Dawson River.

Platyphanes punctipennis Cart. = *Trisilus punctipennis* Cart.— This species must be removed from this genus, from its not having striate-punctate elytra. Having recently identified *Trisilus femoralis* Haag, I consider that my species should be placed under *Trisilus*. For distinction, the following differences may be noted. In *T. punctipennis*, the form is less convex, anterior angles of prothorax more advanced, femora more slender. The prosternum and clypeus are short in both, but there is an evident, though short, space between the procoxæ and front margin of the prosternum, though Haag-Rutenberg stated that they touched this margin.

MITREPHORUS, n.gen.

Near *Olisthæna*, from which it differs in the following characters. Antennæ shorter and stouter, joint 3 scarcely longer than 4, apical joints more enlarged, eleventh larger than the rest, ovate. Head short and deeply received into the prothorax, the eyes partly concealed, less widely separated (than in *Olisthæna*); forehead subvertical. Prothorax very convex, subtruncate at apex, its anterior angles scarcely produced, obtuse and deflexed; very narrowly bordered at sides and apex, without any foliation or differentiation of disc to the border; sides little narrowed at apex. Legs short; tibiæ thin, glabrous, the middle and hind tibiæ slightly curved.

MITREPHORUS CONVEXICOLLIS, n.sp.

Elongate-ovate; whole surface above, beneath, and legs, nitid black; tarsi and apical joints of antennæ piceous-red.

Head closely and distinctly punctate, epistoma rounded, labrum not prominent, canthus little raised, parallel behind; suture

straight, forehead vertical, eyes half concealed by prothorax, separated by a distance equal to the transverse diameter of one eye; antennæ reaching the base of prothorax, joints 3-5 short and slender, 7-11 moderately enlarged, 8-10 somewhat round, about as wide as long, 11 ovate, longer and wider than 10. *Prothorax* $2\frac{1}{2} \times 4$ mm., convex, feebly arcuate-emarginate at apex: anterior angles scarcely produced, deflexed and obtuse, the sides feebly rounded anteriorly, nearly straight behind; posterior angles subrectangular, widest at base, lateral border and channel very narrow, apical border still narrower, disc without any lateral foliation, and, like the head, densely and evenly punctate. *Scutellum* transversely triangular, nearly smooth. *Elytra* slightly wider than prothorax at base, moderately convex, scarcely parallel, sides narrowly bordered and channelled throughout, disc closely and irregularly punctate (very much as in *O. tenuitarsis* Pasc.). Abdomen with two apical segments minutely punctate, other segments striolate, intercoxal process triangular; metasternum coarsely punctate; prosternum rugose, widely carinate, its process received into a V-shaped notch of the mesosternum; legs and tarsi rather short, claw-joint of posterior tarsi scarcely longer than the basal joint. *Dimensions*, $9\frac{1}{2}$ -11 \times 4-5 mm.

Hab.—Tambourine Mountain, South Queensland.

Two specimens, taken by Mr. A. M. Lea and the author respectively, in January, 1912, can be readily distinguished from *Olisthæna* by their convex prothorax, with its wide and bent down anterior angles, the disc continuous to the lateral channel, less parallel form, etc. Type in the author's Coll.

TOREUMA, n.gen.

Elongate, subparallel, eyes large, rather close. Epistoma short and tumid, canthus little raised and rounded in front; antennæ short and very fine, penultimate joints not much enlarged, last joint of maxillary palpi small, securiform, of the labial obconic, prothorax moderately convex, explanate laterally, sides arcuately narrowed from base to apex, strongly emarginate at apex, elytra strongly arched longitudinally, gibbous near the

middle, irregularly, subfoveately impressed; femora tumid, tibiae thin, glabrous above, finely tomentose beneath, tarsi short, basal joint shorter than the apical, intercoxal process rather narrow, prosternum short and carinate; other characters as in *Olisthaena*.

A genus not very near any other, distinguished by its narrow parallel form, with unusual convexity.—(*τορευμα*, embossed work).

TOREUMA CUPREUM, n.sp.

Elongate, parallel, convex; nitid coppery-bronze above, reddish-brown beneath; antennæ, tibiae, and tarsi red.

Head finely and closely punctate, the epistoma rounded, labrum prominent; canthus oblique, little raised, scarcely angulate in front; suture straight and well marked, forehead widely canaliculate; eyes large, separated by a distance less than the transverse diameter of one eye; antennæ not reaching base of prothorax, joint 3 little longer than 4, 3-6 subcylindric, 7-10 obconic, 8-10 enlarged but not so wide as long, 11 oval. *Prothorax* 2 × 4 mm., length measured in middle, width at base, bisinuate at apex, the middle *moderately*, the angles considerably advanced and acute; sides arcuately widening to the base, the latter bisinuate, the posterior angles more sharply acute than the anterior; apex and sides with moderately thick border, the latter finely channelled within, explanate margins rather wide and opaque in colour, the disc very nitid, both disc and margins finely, not closely, punctate. *Scutellum* scutiform (triangular, with rounded sides), punctate. *Elytra* of same width as prothorax at base, very convex, with highest point in the middle; sides subparallel for the greater part, narrowly bordered and channelled throughout, the whole surface unevenly vermiculate-punctate, with unequal foveæ irregularly scattered, the vermiculate intervals closely and evidently punctate, some larger impressions near base. Apical segment of abdomen closely punctate, other segments distinctly striolate, intercoxal process triangular; sternum with fine shallow punctures; prosternum carinate, received into a semicircular notch of the mesosternum; tarsi short, the claw-joint nearly as long as the rest combined. *Dimensions*, 10 × 4½ mm.

Hab.—North Queensland (Mr. F. Dodd).

A single specimen(♂) sent by Mr. Dodd, is evidently separated from the described genera by the combination of characters noted above. Type in the author's Coll.

Paraphanes Macl.—Lea has described a species as *Paraphanes Dumbrelli*, that presents so many differences from Macleay's genus as to render it inadmissible to its ranks. As Macleay's description, as to some details, is a little vague, while that of *P. Dumbrelli* omits some essential characters, I propose the new genus *Bolbophanes* for Lea's species, and two other North Queensland insects; and I give below a comparison of the characters of *Paraphanes* and *Bolbophanes*, taken from specimens compared with the type.

Paraphanes Macl.

Form elongate, moderately convex, parallel.

Antennæ long, penultimate joints little enlarged, 3 distinctly longer than 4, joints 3-10 gradually enlarging and obconic, 11 twice as long as 10, subcylindric.

Eyes quite free of prothorax, and very prominent.

Prothorax long; length to breadth as 2 : 3.

Sides bisinuate, anterior angles sublobate; posterior dentate, produced outwards.

Elytra lineate-punctate.

Prosternum very long, sharply carinate.

Mesosternal cavity rounded.

Epipleuræ very narrow, incomplete.

Bolbophanes, n.gen.

Form short, very convex (*Paropsis*-like), ovate.

Antennæ short, joints 8-10 abruptly enlarged and transverse, 3-7 short and slender, 11 large and ovoid.

Eyes (normally) partially covered by prothorax, not at all prominent.

Prothorax short; length to breadth as 1 : 2.

Sides widely rounded, arcuately narrowed from base to apex, posterior angles scarcely produced.

Elytra irregularly, closely punctate.

Prosternum very short, coxæ almost touching front margin, a short wide carina.

Mesosternal cavity triangular.

Epipleuræ very wide, incomplete.

Femora with fringe of hair on lower surface.

Front tarsi of ♂ little enlarged.

Hind tarsi with last joint as long as the rest combined.

Femora glabrous.

Front tarsi of ♂ considerably enlarged.

Hind tarsi with basal and claw-joint subequal.

N.B.—The fringed femora are a noteworthy, distinguishing character of *P. nitida* Macl., not mentioned by its author.

From the above, it is evident that the two genera *Bolbophanes* and *Paraphanes* come under widely separated sections of the subfamily, the former standing next to *Hemicyclus*; while the latter approaches *Prophanes* in the structure of the antennæ, though standing alone in other respects.

BOLBOPHANES RUGATUS, n.sp.

Ovate, very convex and nitid; elytra dark greenish-bronze, head and pronotum metallic green; antennæ, legs, and tarsi blue; underside metallic green; abdomen sometimes reddish.

Head: eyes scarcely free of prothorax, and widely separated, epistoma rounded, canthus small and inconspicuous, rather coarsely punctate; antennæ short, joints 7-11 gradually enlarged, 9-10 transverse, 11 nearly round. *Prothorax* more than twice as wide as long, widely emarginate at apex; anterior angles advanced but obtuse, sides arcuately widening to base, the latter bisinuate; posterior angles subrectangular and not produced, sides a little explanate with narrow reflexed border, disc without regular impressions or central line, finely punctate on middle, more coarsely on margins. *Scutellum* triangular and punctate. *Elytra* of same width as prothorax at base, humeri obtuse, widest behind the middle, with narrow border continued to apex, with fine shallow punctures close and irregular, the surface (especially towards sides) longitudinally ridged, their interstices more or less wrinkled. *Epipleuræ* and *episterna* coarsely punctate; abdomen finely punctate; prosternum short, its process convex and rounded behind. *Tarsi* short. *Dimensions*, 9-13 × 6-8 mm.

Hab.—Blue Mountains, N.S.W. (Dr. E. W. Ferguson)—Tambourine Mountain, Queensland (R. Illidge, and the author).

Five specimens examined, show little sexual distinction, (in three of them, the front tarsi are wanting). A *Paropsis*-like insect, closely allied to *B. Dumbrelli* Lea, from which it differs in (1) the coarser punctures of upper surface, (2) its uneven surface of elytra, (3) its blue antennæ and legs, which in *B. Dumbrelli* are reddish.

BOLBOPHANES VARICOLOR, n.sp.

Shortly ovate, very convex, glabrous (except on head) and moderately nitid; colour various, in some specimens purple or cyaneous, in others dark green with purple reflections (the elytra generally concolorous); underside, legs, antennæ, and tarsi metallic blue-black or violaceous.

Head densely punctate, epistoma and labrum with short dark hair, the latter prominent, the former rounded in front, sinuate at the canthus, deeply impressed at the suture; eyes separated by a distance greater than the apparent transverse diameter of an eye; antennæ scarcely reaching the base of prothorax, joint 3 slightly longer than 4, joints 8-11 slightly enlarged, 9-10 nearly round, 11 largest and ovoid. *Prothorax* ($2\frac{1}{2} \times 5\frac{1}{2}$ mm.) widest at base, length measured in middle, apex and base bisinuate, in each case produced at the middle and at the angles; anterior angles acute but slightly rounded, sides arcuately widening to the base; posterior angles acute, sides and apex narrowly bordered, lateral margins explanate and sometimes finely corrugated, disc closely and uniformly finely punctate, a smooth middle line sometimes indicated, a small basal fovea on each side. *Scutellum* rounded behind and on sides, punctate. *Elytra* very convex, slightly gibbous at the shoulders, closely fitting and of same width as prothorax at base, then widening and oval, a little sinuously narrowed near the apex, very narrowly bordered throughout; disc uniformly closely, distinctly punctate, with a slight tendency to rugosity. Abdomen minutely rugose, the last segment closely punctate, with a circular depression; sternum sparsely, epimera closely punctate; prosternum carinate, received behind into a triangular cavity of the metasternum; intercoxal process wide, its apex truncate; three basal joints of front and intermediate tarsi

considerably enlarged in the male, basal joint of hind tarsi as long as the claw-joint. *Dimensions*, 10-12 × 5-6½ mm.

Hab.—Kuranda (Dodd and Tillyard), Mackay and Stanthorpe (Illidge), North Queensland (Melbourne Museum).

Twelve specimens of this apparently common Queensland insect have been examined (4 males, 8 females), and these differ only in size, colour, and the sexual characters mentioned above. Six of them are more or less purple-bronze with cyaneous reflections on the head and prothorax; the others are chiefly dull green, with some purple or metallic reflections; the colour of the underside and legs also varies from being nearly black, to violet or blue. Types in the author's Coll.

HEMICYCLUS FLAVIPES, n.sp.

Widely ovate, convex, glabrous; head (especially clypeus) metallic, pronotum and elytra nitid bronze-brown, the former with slight coloured reflections; underside metallic bronze with green reflections, epipleuræ greenish, labrum, palpi, antennæ, and legs yellow.

Head: labrum very prominent, epistoma truncate and closely punctate, space between eyes wider than the apparent diameter of one eye (as seen from above), sparsely punctate, antennæ extending beyond base of prothorax, joints 7-11 enlarged, 8-11 oval, 11 longer and wider than 10. *Prothorax* 2½ × 5 mm., widely obliquely emarginate at apex, anterior angles obtuse, sides nearly straight and strongly widening to base, posterior angles acute but slightly rounded at extremity, base bisinuate, explanate margins corrugated and punctate, disc smooth. *Scutellum* triangular. *Elytra*: shoulders rounded, wider than prothorax at base, widest behind middle, finely margined, channel widest at shoulder, then gradually narrowing behind and, with the epipleuræ, abruptly ending before apex. Disc, under lens, seen to be closely set with shallow punctulate impressions, epipleuræ wrinkled and sparsely punctate, abdomen with last segment finely punctate; prosternum saddle-shaped, rounded behind, flanks of prosternum finely striolate. Posterior tarsi with joints 1 and 4 of about equal length. *Dimensions*, 12 × 10 mm.

Hab.—Dorrigo, New South Wales (Mr. J. H. Maiden).

A single female specimen, in the South Australian Museum, is easily separated from its congeners by its yellow appendages, *inter alia*.

CHARTOPTERYX PLANUS, n.sp.

Elongate-elliptic, glabrous, subnitid; chocolate-brown above and below, the margins of elytra with a pale band; legs, oral organs, antennæ, and tarsi reddish, tibiæ and tarsi with golden tomentum.

Head: labrum emarginate and ciliate, showing membranous hinge; epistoma broadly truncate, canthus raised and shortly rounded, suture arcuate and clearly defined; impunctate; eyes very large, just free from the prothorax, separated by a distance of one-half the width of one eye; antennæ long, slender (extending to the middle of the elytra), joint 3 nearly as long as 4 and 5 combined, 3-6 cylindric, 7-10 very slightly enlarged and successively shorter, 11 narrowly elongate-ovate. *Prothorax*: depressed, 3 × 6 mm., (length measured in the middle), apex semi-circular, its angles strongly projecting and acute (with their tips rounded), sides sinuate anteriorly, moderately widened behind the middle, again sinuate near the acute and slightly produced hind angles; narrowly produced throughout, the lateral and latero-anterior border slightly raised, nitid, and thicker than the rest, margins rather widely foliate and concave, and with the disc entirely impunctate; base strongly bisinuate, with wide central lobe; a small foveate impression within each posterior angle. *Scutellum* triangular with rounded sides, convex and impunctate. *Elytra* moderately convex in both directions, nowhere gibbous; elliptic, rather suddenly incurved towards apex, humeral angle subobsolete and obtuse; widest behind middle, each elytron separately rounded at apex; extreme border narrowly raised (discontinued towards apex), just perceptibly canaliculate within; disc with the suture and three obscurely raised lines smooth from base to apex, the intervals very minutely and irregularly punctate, a short scutellary row of small punctures visible (with a lens); whole underside smooth and impunctate with

the exception of some minute punctures on the apical segment; prosternum compressed and subcarinate, its process little enlarged behind or produced in front; intercoxal process widely triangular (like a Gothic arch), legs and tarsi long, anterior tarsi with three basal joints strongly dilated, fourth joint very small; posterior tarsi with basal joint almost as long as the rest combined, joint 2 twice as long as 3, claw-joint as long as 2 and 3 combined.

Dimensions, 15-18 × 7½-9 mm.

Hab. - Wollongbar, Richmond River (Mr. R. Helms); Acacia Creek (the author).

Two specimens in my collection, both male, and a specimen in the Queensland Museum, are the only specimens I have seen of this species, one of which was taken by the author by beating creepers in a dense scrub. It is very like *C. imperialis* Carter, in colour, form and sculpture; but is much smaller, less convex, with the greatest height at, or rather behind, the middle. Type in the author's Coll.

CHARTOPTERYX BLACKBURNI, n.sp.

Elongate, lightly obovate, and little convex; head metallic blue and green with purple reflections, pronotum brilliant green, elytra blue with suture and sides purplish, sternum iridescent green, legs darker, abdomen reddish with metallic reflections, upper surface sparsely clothed with long, black, upright hairs.

Head with epistoma rounded and coarsely punctate, forming nearly a right angle with the raised and prominent canthus, forehead wide between eyes, more sparsely and less coarsely punctate than the epistoma; antennæ very little enlarged apically, extending considerably beyond the base of thorax, joint 3 as long as 4 and 5 combined, 3-7 subcylindric, 8 much shorter than 7 and slightly wider, 2-10 oval, longer than wide, 11 elongate-ovate. *Prothorax* 3 × 5 mm., widest at base, length measured in middle, arcuate-emarginate at apex, anterior angles prominent and acute, sides rather abruptly widened at middle, posterior angles produced and acute, lateral border narrow, moderately channelled within, base bisinuate, the whole (including the border) sparsely clothed with setiferous punctures with four

larger depressions, two near sides, two near base. *Elytra* wider than prothorax at base, and four times as long, shoulders rounded, sides gradually widening till near the apex, the latter unarmed; lateral border and channel very narrow but continuous to apex, epipleuræ continuous almost to apex, the whole surface evenly but not very closely dotted with small setiferous punctures, becoming smaller towards apex, a single lateral row of close large punctures. *Abdomen* with finer setiferous punctures than on elytra, the hairs arising therefrom adpressed and of a lighter colour; epipleuræ and episterna coarsely punctate, prosternum carinate and sharply produced behind, submentum transversely rugose. Hind tarsi with basal joint as long as the rest combined. *Dimensions*, $16 \times 7\frac{1}{2}$ mm.

Hab.—Australia.

A single female specimen in the South Australian Museum, labelled Australia, Blackburn Coll., is distinguished from its allies by the combination of brilliant colour, and depressed form, and the punctures of elytra evidently smaller than in *C. Mastersi* Macl., and *C. victoriensis* Blackb. A second specimen in the British Museum consignment to me, labelled S. Australia (F. Bates, 81, 19).

CYCLOPHANES, n.gen.

Between *Oremasis* and *Hemicyclus* in facies and characters. Widely ovate, very convex longitudinally, explanate and less convex transversely, especially on pronotum and apical half of elytra. Glabrous. Mentum trapezoidal, convex; labial palpi short, basal joint securiform; maxillary palpi long and robust, last joint large and securiform. Epistoma truncate in front, rounded at sides, canthus arcuate, raised and concave within, limiting suture clearly defined and arcuate. Eyes large, reniform, clear of prothorax, not approximate; antennæ long, extending considerably beyond the base of prothorax, joint 3 as long as 4-5 combined, cylindric, 4-7 subequal in length, successively wider at apex, obconic, 8-11 oval, successively wider and shorter, longer than wide, 11 wider and longer than 10, rounded at apex. *Prothorax* twice and one-half as wide at base as long in the middle,

narrowly bordered at sides and apex, lateral margins widely explanate. *Elytra* of same width at base as prothorax, shoulders definitely angulate and obtuse, very convex, with highest point in front of middle, irregularly punctate, epipleuræ wide, horizontal, rather abruptly narrowed before apex; elytra narrowly bordered till near apex, the border then suddenly bent down and continuous (though not visible from above) to apex. Intercostal process rather widely arched, prosternum compressed and saddle-shaped at apex, conical behind, not carinate; mesosternal cavity rounded; appendages yellow; tibiæ with small spine at apex, anterior tarsi of male with three basal joints much enlarged, posterior tarsi with basal and apical joints of equal length (excluding claws), the other two joints short. Penis short, attached to an arcuately widening lamella; female with a long protuberant ovipositor.

CYCLOPHANES VARIEGATUS, n.sp.

Widely ovate, moderately nitid above, very nitid beneath; head purple-green and gold, pronotum purple on margin, green and purple on disc; elytra mostly dark green, with suture, border, and shoulders coppery-purple; a purple band, wide at base, extending thence round the sides (but not reaching them) to apex, where it meets the sutural band; epipleuræ bright blue, variegated with purple; underside iridescent purple, blue and gold, the former colour predominant, the last on the epimera; antennæ, oral organs, legs, and tarsi yellow.

Head rather closely punctate on front, more sparsely and coarsely on epistoma, front widening behind, eyes separated by a distance equal to the transverse diameter of one eye. *Prothorax* $2\frac{3}{4} \times 7$ mm., sinuate-emarginate at apex, the middle very slightly advanced, the angles reaching to half the width of eyes, obtuse and rounded, sides evenly and arcuately widening to base, the latter bisinuate, central lobe wide, posterior angles rather widely acute, not at all produced, foliate margins wide, a little upturned, transversely wrinkled, separated from disc by a blue sulcus containing an irregular row of punctures, disc nearly flat, finely and closely punctate, a small basal fovea on each side of scutellum.

Scutellum triangular, sides rounded, finely punctate. *Elytra* ovate, very convex or humped in front of middle, thence evenly and rather flatly declivous to apex, the latter rather sharp, but unarmed; a small depression at extreme shoulders and on each side of scutellum, border narrowly canaliculate within, abruptly ending before apex, densely not coarsely punctate, with three obscure, sometimes raised lines on each elytron, less punctate than the rest, more evident on apical than basal half. Abdomen faintly striolate, the last segment punctate, sternum finely punctate at sides only and on epimera; epipleuræ slightly rugose and very finely punctate, submentum evidently punctate, legs slender, tibiæ straight. *Dimensions*, 14-15 × 9-10 mm.

Hab.—Dorrigo, New South Wales (R. J. Tillyard).

Three specimens of this beautiful insect were amongst Mr. Tillyard's captures, two males and one female. The anterior tarsi show more than the usual sexual enlargement. The colours are much more brilliant on the underside than above, but their definition is difficult to describe. Its form and combined characters do not fit it into any of the existing genera, though it is nearest *Oremasis*; while approaching *Hemicyclus* in its broadly ovate form, from which it is readily distinguished by its more explanate surface, longer (and yellow) legs, and antennæ. Types in the author's Coll.

CYCLOPHANES GLORIOSUS, n.sp.

Widely oblong-ovate; upper surface brilliant iridescent blue and green with purple reflections, the head rather densely clothed with golden pubescence, pronotum at the sides and epipleuræ of elytra purple; underside black; antennæ, palpi, legs, and tarsi bright yellow.

Head: labrum very prominent and rectangular, epistoma rounded in front, angular at its junction with canthus, the latter quite straight at the sides, angular in front, closely and not coarsely punctate, these sometimes concealed by dense short recumbent hairs; eyes large, reniform, separated by a distance equal to the transverse diameter of one eye (as seen from above); antennæ extending slightly beyond the base of prothorax, joints

7-11 moderately enlarged, 3 about half as long again as 4, 4-6 equal, subcylindric (very slightly obconic), 8-10 rather quadrate-ovate, not wider than long, shorter than 7, the last intermediate in form and length between 6 and 8; 11 oblong-ovate, as long as 9 and 10 combined. *Prothorax* $4\frac{1}{4} \times 7\frac{1}{2}$ mm., length measured in the middle, width at base, width across front angles 4 mm., apex with discal part straight (or sometimes produced forward in the middle), the anterior angles produced to half the width of the eyes, fairly widely rounded, sides arcuately widening to base; posterior angles dentate, acute and a little outwardly directed (overlapping the elytra), base strongly bisinuate, central lobe produced; apex, sides, and angles at base very narrowly bordered, margins wide, slightly concave and coarsely rugose-punctate, disc nearly smooth, with small punctures sparsely and irregularly placed, a more or less regular line of larger punctures at base and apex; without any indication of a middle line. *Scutellum* scuti-form, impunctate, depressed at sides, convex in middle. *Elytra* very convex, gibbous at shoulders, humeral angle obtuse, soon widening considerably behind the shoulders, parallel for the middle portion, then rather abruptly incurved to the apex, the last unarmed and rounded; disc irregularly punctate, punctures coarser and more crowded in the humeral region, base and sides, more sparse and smaller near suture and quite evanescent on apical declivity, intervals minutely punctate on disc, rugose and vermiculate near shoulder and on epipleuræ. Abdomen minutely punctate (the last segment more coarsely and closely so, and truncate at apex); sides of metasternum and epimera rather finely punctate, prosternum short, saddle-shaped, its process scarcely produced forward, triangular with rounded sides behind, received into the correspondingly notched mesosternum. Legs long, finely pitted, tibiæ straight, with a line of short yellow hair on the inside, tarsi flavosetose, the anterior with three basal joints enlarged, posterior with basal and claw-joint of about equal length, the other two joints short. *Dimensions*, 17-20 × 10-11½ mm.

Hab.—Bellinger River (Mr. Jackson, per R. Helms), Dorrigo (R. J. Tillyard),

Three specimens, all, I think, ♂, in my collection, in colour and general appearance resemble *Prophanes Mastersi* Pasc., but are without the spinose prothorax and elytra. The bright yellow appendages, more rounded form of both prothorax and elytra, the antennal and tarsal structure, the absence of the abdominal excavation, and its greatly enlarged anterior tarsi, together with the strongly sculptured margins of prothorax, mark this species as an ally of *Cyclophanes variegatus*. Type in the author's Coll.

CYCLOPHANES SPLENDENS, n.sp.

Widely ovate, glabrous, very nitid; head purple and gold, pronotum metallic purple on disc, bronze at sides, a line of blue on inside of margins, elytra metallic green with purple reflections at suture and sides, whole underside iridescent and variegated (purple, green, and blue), legs, tarsi, and antennæ yellow (femora greenish).

Head: labrum very prominent and rectangular, epistoma truncate, slightly rounded at sides, a depression within each corner, defining suture straight and deep; eyes large, separated by a distance equal to the apparent transverse diameter of an eye; closely, not coarsely punctate; antennæ extending beyond the base of prothorax, joint 3 about as long as 4-5 combined, 7-11 gradually enlarging, 8-10 ovate, not wider than long, 11 longer and wider than 10. *Prothorax* $2\frac{1}{2} \times 6$ mm., length measured in the middle, width at base, arcuate-emarginate at apex, anterior angles reaching the middle of the eye, moderately acute, sides arcuately and strongly widened to base, posterior angles acute but slightly blunted, base bisinuate, extreme border narrowly raised on sides and apex, explanate margins wide, concave, transversely wrinkled and punctate, separated from disc by a blue channel containing a row of punctures, disc nearly smooth, middle line vaguely suggested at base. *Scutellum* widely triangular, smooth. *Elytra* slightly wider than prothorax at base, ovate and convex, a little produced at apex, humeral angle distinct and obtuse, lateral border and channel narrow, the former abruptly bent down and ending before the apex; whole surface (except the apical declivity) finely, regularly and rather closely punctate,

depressed on each side of scutellum and foveate within the humeri; abdomen finely striolate at sides, the last segment punctate, with large circular depression, epi- and parapleuræ nearly smooth, sternum finely rugose at sides, prosternal process not carinate, saddle-shaped in front, circular behind, closely fitting mesosternal cavity. Ovipositor extruded. *Dimensions*, 13 × 9 mm.

Hab.—Tambourine Mountain, South Queensland (H. Hacker).

A single female specimen, in the Queensland Museum, is a singularly beautiful insect, much more nitid than and without the longitudinal lines on the elytra of *C. variegatus*. There are two specimens in the Macleay Museum, from New South Wales.

PROPHANES DUCALIS, n.sp.

Oblong-ovate, glabrous, whole surface above and below a rich metallic purple bronze, very nitid, (borders of pronotum and parts of head tinged with green), legs blue, femora with violet reflections, apical joints of antennæ fuscous.

Head with labrum produced (showing membranous hinge), truncate and rectangular, epistoma straight in front, angulate at its junction with canthus, the latter raised and elongate, limiting suture straight and clearly impressed, front widely channelled, eyes large and separated by a distance considerably less than the transverse diameter of one eye; closely, irregularly punctate, the punctures larger on clypeal than on frontal area (in neither case so coarse as in *P. Mastersi* Pasc.). Antennæ extending considerably beyond the humeri, joints 7-11 enlarged, 3 about as long as 4 and 5 combined, 4-6 obconic, 7-10 pear-shaped, 8-10 shorter than 7, not wider than long, 11 elongate subcylindric, nearly as long as the preceding three combined. Prothorax, 4 × 7 mm., length measured in the middle, width at base, widely emarginate at apex, anterior angles strongly produced into spines curved obliquely outwards, width between spines 5 mm.; sides slightly sinuate (widely in front, narrowly behind), otherwise nearly straight, base strongly bisinuate, central lobe produced and subtruncate, posterior angles produced (less so than the middle lobe) and acute, with narrow raised border throughout, except on central basal lobe; surface uneven, with six large foveate depressions, two form-

ing (or rather including) the middle line, the anterior of these elongate, the basal round, two on each side (occupying a large portion of disc); surface rather closely punctate, the scarcely concave explanate margins with much larger punctures. *Scutellum* oval. *Elytra* ovate, subparallel at the middle, very convex (gibbous in humeral region), of same width as prothorax at base, humeri obtuse, widest at middle, strongly bispinose at apex, narrowly bordered, and, with the epipleuræ, closely irregularly foveate-punctate, intervals smooth, vermiculate, sometimes showing a longitudinal arrangement, foveæ sometimes confluent, with smaller bronze punctures within them; of varied size, but larger and more confluent towards sides. *Abdomen* nearly smooth, and with the sternum brilliantly metallic, the last segment with a large central depression, narrowed and curved at base, widened into a circular excavation at apex; intercoxal process moderately wide, sides of metasternum rugose-punctate, epimera with large round punctures, prosternum punctured on sides, its process saddle-shaped, not carinate, produced acutely forward, fitting into a widely triangular cavity of the mesosternum behind; legs long, tibiæ pitted, anterior tarsi enlarged, posterior tarsi with basal joint longer than 2 and 3 combined, claw-joint not as long as the rest combined, clothed with reddish tomentum. *Dimensions*, 20-21 × 10½-11 mm.

Hab.—North Queensland (F. P. Dodd), Upper Herbert River (per C. French, F.L.S.).

Two specimens, I believe ♀, of this fine species under examination. A specimen sent also from the British Museum; there is one in the Macleay Museum. The curious abdominal excavation, though unnoticed in other descriptions, occurs also in *P. Mastersi* Pasc., and in *P. cupricollis* Macl., and is possibly a sexual distinction, the obvious males having a less regular depression. It occurs as an irregular depression also in *Cyphaleus rugosus* Gray, *C. crevus* Waterh., *C. fulgidipennis* Boisd., and *C. insignitus* Pasc. *P. ducalis* is nearest to, though very distinct from, *P. Masteri* Pasc., and *P. aculeatus* Westw., (the latter only known to me by description). From the former, it is distinguished by the less closely punctate head, eyes larger and less

separated, anterior angles of prothorax longer, posterior reflexed (in *C. Masteri* deflexed), elytra narrower, its spines longer, foveate punctures of elytra quite irregular and close, its intervals smooth, besides colour-differences. From *C. aculeatus* Westw., it differs in its metallic head, prothorax, and underside, and the sculpture of the elytra. Type in the author's Coll.

PROPHANES BREVISPINOSUS, n.sp.

Ovate, convex, glabrous; head green-bronze, pronotum purple-bronze, elytra obscure purple and blue, underside obscure green; antennæ, legs, and tarsi blue, the last clothed with reddish tomentum.

Head rather coarsely rugose-punctate, epistoma rounded in front, angulate at sides, canthus raised, prominent and rectangular in front, suture deeply impressed, arcuate, forehead canaliculate, eyes more distant than the obvious transverse diameter of one, and quite free of the prothorax; antennæ with joint 3 as long as 4-5 combined, 4-7 subcylindric and equal, 8 shorter and enlarged, 9-11 moderately enlarged, 9 and 10 shortly ovate, longer than wide, 11 more elongate than 10. *Prothorax* $3 \times 5\frac{1}{2}$ mm., length measured in middle, width at base, nearly flat, depressed behind apical borders, and within posterior angles, bisinuate at base and apex, the middle lobe and angles produced; anterior angles with a rather wide, short tooth directed outwards, sides scarcely sinuate in front, nearly straightly widened to base, posterior angle acute, obliquely directed outwards; sides and apex narrowly bordered, the former not foliate or furrowed; middle line indicated by a small depression at base, disc rather evenly, closely, not coarsely punctate. *Scutellum* scutiform, punctate, with a central depression. *Elytra* convex, ovate, humeri obtuse, with a slight depression at flanks, apex briefly dentate (scarcely spinose), narrowly bordered and channelled, the channel occupied by a line of large punctures; disc regularly, closely, and finely punctate, punctures evanescent at apex, epipleuræ coarsely punctate. Abdomen striolate-punctate, the last segment punctate only, its centre depressed, its apex circularly excised; intercoxal process widely rounded, sides of metasternum,

and epimera with rather large, round punctures, prosternum more finely punctate, the process rather wide, not carinate; pointed in front and triangularly rounded behind. Legs long, three basal joints of anterior tarsi enlarged, posterior tarsi with claw-joint wanting, basal joint long. *Dimensions*, 16 × 8 mm.

Hab.—North Queensland.

A single male (I think from Mr. Dodd) is nearest *P. quadri-spinosus* Waterh., which is, however, said to be "parce pubescens," "niger," with anterior angles "longe porrectis," and posterior angles "rectis," all of which characters sufficiently differentiate it from the above. The raised and subdentate canthus should assist in its identification. Type in the author's Coll.

MÆRODES KERSHAWI, n.sp.

Elongate, parallel; black, glabrous, moderately nitid, antennæ and tarsi reddish, apex of palpi testaceous.

Head densely punctate, epistoma truncate in front, widely rounded on sides, canthus raised, suture only defined by oblique lines at the sides, eyes separated by a distance less than the apparent transverse diameter of an eye (seen from above), antennæ not reaching base of prothorax, joint 3 little longer than 4, 7-11 successively widened and transverse, 9-11 widely ovate. *Prothorax* $3\frac{1}{2} \times 7$ mm., length measured in the middle, width near base, apex arcuate-emarginate; anterior angles strongly produced outwards into a sharp spine, sides rounded, sinuate behind front angles, narrowed behind, base bisinuate; posterior angles acute, lateral margins subhorizontal, widening at the anterior angles and narrowly produced on apex as far as the eyes; disc regularly, closely punctate, with some irregular depressions near base. *Scutellum* scuti-form and concave. *Elytra* wider than prothorax at base, shoulders rounded, sides parallel for the greater part, lateral border narrowly channelled within, continuous to the apical spine, the latter short and stout, not placed at suture, but about 2 mm. apart; disc with about fourteen rows of large punctures, uneven in size and position (in general *close*), rows 8-9 and 12-13 somewhat commingled, the punctures continuous to the apex, but smaller in this region; intervals and epipleuræ smooth. Abdomen finely punctate-

striolate; sides of metasternum and epimera strongly pustulose, prosternum rugose, its process carinate, produced anteriorly and received into a triangular cavity behind; intercoxal process widely arched. *Dimensions*, 20 × 10 mm.

Hab.—Queensland.

Two specimens, both probably male, are amongst some Cyphaleinæ sent for examination, from the Melbourne Museum, by Mr. J. Kershaw, the courteous Curator, to whom I dedicate the species. A specimen also in the Adelaide Museum. It is readily distinguished from *M. Westwoodi* Macl., by the following: (1) wider and differently shaped prothorax, especially wider at apex through its strongly divergent spines, which are narrower and more forwardly directed in *M. Westwoodi*. (2) Punctate-striate elytra (quite irregular sculpture in *M. Westwoodi*). (3) The apical spines placed farther from the sutural extremity. (4) Stouter and more parallel form. Type in National Museum, Melbourne.

THE AUSTRALIAN CNODALONINÆ.

This subfamily occupies a position between Cyphaleinæ and Helopinæ. They are differentiated from the former by the following characters. Head not largely enclosed in prothorax, the latter not strongly emarginate, prosternum little or not at all compressed, its process less produced behind, and the corresponding mesosternal notch less enlarged, the epipleural fold continuous to the apex, tarsi shorter. From the Helopinæ, they are differentiated by the depressed joints of their antennæ, and their brilliant metallic colours. Widely distributed in the East Indies, South America, Madagascar, so far only four genera have been recorded from Australia; and these may be distinguished by the following table.

- | | |
|--|--------------------------|
| 1(3) Prothorax and elytra more or less cylindric. | |
| 2. Elytra coarsely and irregularly punctate..... | <i>Titæna</i> Erichs. |
| 3. Elytra finely striate-punctate | <i>Thesilea</i> Haag. |
| 4. Body oval, prothorax explanate, tarsi thin..... | <i>Chariotheca</i> Pasc. |
| 5. Form more depressed, tarsi short and stout..... | <i>Espites</i> Pasc. |

Pascoe differentiates *Espites* from *Chariotheca* by its sloping mesosternum, short stout tarsi, and narrow clypeus.

The genus *Cholipus* Pasc., originally placed with the Cnodaloninæ, is now considered identical with *Encyalesthus* (Tenebrioninæ). *Tetraphyllus* is apparently confined to Madagascar, the two species under that name in Gemminger and Harold, and Masters' Catalogue, are evidently wrongly placed, and are almost certainly synonymous as follows.

Hemicyclus grandis Westw. = *Hemicyclus* (*Tetraphyllus*) *Reaumurii* Casteln. *Espites basalis* Pasc. = *Espites* (*Tetraphyllus*) *sumptuosus*(?) Hope. Hope's type has apparently been lost, and the description is very scanty, so that it would be desirable to retain Pascoe's name.

TITÆNA Erichs.

- 1(7) Pilose.
 2(4) Colour variegated; size large, 15 mm. long.
 3. Prothorax more cylindric, punctures coarser.....*columbina* Erichs.
 4. Prothorax more explanate, punctures finer.....*tyrrhena*, n.sp.
 5(7) Colour blue, size smaller.
 6. Feebly pilose, rugose-punctate; 8-9 mm. long.....*alcyonea* Erichs.
 7. Strongly pilose, not at all rugose; 6 mm. long.*minor*, n.sp.
 8(10) Glabrous.
 9. Size large, colour variegated.....*varicolor* Haag.
 10. Size smaller, colour dark metallic (black with age)....*tasmanica* Champ.

THESILEA Haag.

Of this genus, two species are recorded from Australia.

T. cuprina Fairm., from Wallis Island. I have identified two specimens sent by Mr. F. Dodd, of Kuranda.

T. planicollis Fairm. = *T. oblonga* Blanch., (*Olisthæna*) = (?) *Chariotheca cupripennis* Pasc.

The former synonymy is contained in the Gemminger and Harold's Catalogue; the latter is my own conclusion from the descriptions and figure (Voy. Pôle Sud, 1853). I have specimens of *C. cupripennis* Pasc., that I compared with the type, from Kuranda.

CHARIOTHECA Pasc.

- 1(3) Form oval.
 2. Pronotum black*amaroides* Pasc.
 3. Pronotum blue.....*Besti* Blackb.
 4(6) Form elongate and parallel.

abdomen strongly punctate, the punctures smaller and more distant than on the elytra. *Dimensions*, 11-11.5 × 3.5 mm.

Hab.—Ebor and Guyra (New England district), New South Wales (R. J. Tillyard and the author).

Three specimens under examination, without evident sexual distinction. A beautiful variegated species, nearest to *T. varicolor* Haag-Rut., but differing in its narrower form, the colours differently arranged, and having much coarser punctures on the prothorax and elytra. *C. varicolor* is, moreover, glabrous or nearly so. Compared with *T. columbina* Erichs., the colour is much more brilliant and various, the prothorax is less cylindric (more explanate on hinder half), the punctures on prothorax are smaller and less crowded, while those on the elytra are distinctly smaller, especially towards the apex. Its distinctions from the other described species are obvious. One specimen has the elytra greenish, with the suture coppery-purple, otherwise identical with the other two. Type in the author's Coll.

TITÆNA MINOR, n.sp.

Upper surface dark peacock-blue, pilose, suture of elytra brassy; underside, legs, antennæ and oral organs red.

Head and *prothorax* densely and (compared with other species) finely punctate, the latter thickly clad with long upright whitish hairs; very gibbous anteriorly, the lateral margins only evident near base from above, sides rather widely rounded, all angles obtuse, the posterior very wide and subobsolete. *Elytra* evidently wider than the prothorax at base, and shortly cylindric, striate-punctate, the striæ shallow, the punctures moderately large (though smaller and closer than in any described species), the intervals with smaller punctures sometimes irregular (near the suture), sometimes in rows, pilose (with more sparse clothing than the prothorax), segments of abdomen longitudinally striate and finely punctate, mesosternum coarsely punctate. *Dimensions*, 6 × 2 mm.

Hab.—Tambourine Mountain, South Queensland (the author)

Several specimens taken by Mr. A. M. Lea, and the author, at night, on fences, in January, 1912, of which four are under ex-

amination. The smallest (except *T. tasmanica* Champ.), and the most finely sculptured species in the genus. From Champion's species, it differs in colour, clothing, and sculpture, the punctures everywhere finer and nowhere variolose. The prothorax has a reddish tinge, when viewed from the side, in some cases. Types in the author's Coll.

EXPLANATION OF PLATES VI.-VII.

Plate vi.

- Fig. 1.—*Platyphanes Clarki*.
 Fig. 2.—*P. chalcopteroides*.
 Fig. 3.—*P. Frenchi*.
 Fig. 4.—*P. ellipticus*.
 Fig. 5.—*P. parallelus*.
 Fig. 6.—*P. minor*.
 Fig. 7.—*P. quadrifoveatus*, var. *subangulatus*.
 Fig. 8.—*P. quadrifoveatus*.
 Fig. 9.—*Bolbophanes Dumbrelli* Lea.
 Fig. 10.—*B. rugatus*.
 Fig. 11.—*B. varicolor*.
 Fig. 12.—*Toreuma cupreum*.
 Fig. 13.—*Chlorophanes punctipennis*.
 Fig. 14.—*Mitrephorus convexicollis*.

Plate vii.

- Fig. 1.—*Prophanes brevispinosus*.
 Fig. 2.—*P. ducalis*.
 Fig. 3.—*Trisilus femoralis* Haag (at first, misdetermined by the author as a new species).
 Fig. 4.—*Cyclophanes gloriosus*.
 Fig. 5.—*C. variegatus*.
 Fig. 6.—*C. splendeus*.
 Fig. 7.—*Chartopteryx imperialis*.
 Fig. 8.—*C. planus*.
 Fig. 9.—*Mærodes Kershawi*.

Some loss of antennæ and tarsi is due to the breaking loose of a specimen in the box sent to Mr. MacIntosh, who kindly took the original photographs.